

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 11-12, 15-16, and 21-22 are presently active in this case, Claims 11, 12, 15, and 16 having been amended, Claims 13-14 and 17-20 having been canceled, and Claims 21 and 22 having been added by the present amendment.

In the outstanding Official Action, Claims 11-20 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement; Claims 11-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite; and Claims 11, 13, 15, 17, and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lennon et al. (US Pub. No. 2003/0018607, hereinafter called "Lennon") in view of Musgrove et al. (USP 7,082,426, hereinafter called "Musgrove").

In response to the several grounds for rejection, and to advance prosecution, the claims have been rewritten to clarify the claimed invention, and more clearly patentably define over the cited prior art. To that end, Claims 13-14 and 17-20 have been canceled, and Claims 11-12 and 15-16 have been amended. New Claims 21-22 corresponding to Claims 11-12, respectively have been added. Amended Claim 11 generally includes features stated in previously pending Claims 11 and 13, and finds support in the specification as follows:

11. A data retrieval method comprising:
 - storing a plurality of structured data items in a first memory (101), each of the structured data items including one or more elements, each of the elements including an element name and an element value; (page 10, line 7- line 16)
 - storing, in a second memory (102), a plurality of element- value- patterns and a plurality of labels which correspond to the element- value- patterns respectively; (page 13, line 1- page 14, line 21)
 - acquiring, from the second memory, one label of the labels which corresponds to the element name of each element by comparing the element value of each element with the element-value-patterns, the label corresponding

to one of the element-value-patterns which matches the element value; (page 15, line 23-page 16, line 15, page 17, lines 1-5)

acquiring a plurality of data sets each including the label and the element name of each element whose element value matches one of the element-value-patterns corresponding to the label; (page 15 line 23-page 16, line 15, page 17, lines 1-5)

storing the data sets in a third memory (104); (page 16, lines 12-15, page 17, lines 1-5)

inputting a search request including a keyword and one of the labels; (page 21, line 20-page 22, line 14)

retrieving, from the third memory, one of the data sets which includes the one of the labels included in the search request, to obtain the element name included in the one of the data sets; (page 26, line 17-page 27, line 1)

(page 31, line 8-page 32, line 16) retrieving, from the first memory, one of the structured data items which includes a first element whose element name is equal to the element name included in the one of the data sets and a second element whose element value includes the keyword; and

outputting the element value of the first element. (page 31, line 21-page 32, line 2)

Amended Claim 12 generally corresponds to previously stated Claims 12 and 14 and finds support in the specification as follows:

12. A data retrieval method comprising:

storing a plurality of structured data items in a first memory (101), each of the structured data items including one or more elements, each of the elements including an element name and an element value; (page 10, lines 7-16)

storing, in a second memory (102), a plurality of element-value-patterns and a plurality of labels which correspond to the element-value-patterns respectively; (page 13, line 1- page 14, line 21)

acquiring, from the second memory, one label of the labels which corresponds to the element name of each element by comparing the element value of each element with the element-value-patterns, the label corresponding to one of the element-value-patterns which matches the element value; (page 15, line 23-page 16, line 15, page 17, lines 1-5)

acquiring a plurality of data sets each including the label and the element name of each element whose element value matches one of the element-value-patterns corresponding to the label; (page 15, line 23-page 16, line 15, page 17, lines 1-5)

storing the data sets; (page 16, lines 12-15, page 17, lines 1-5)

storing a plurality of word-patterns and the labels corresponding to the word-patterns respectively, in a fourth memory (Fig. 21 110); (page 38, line 17-page 39, line 4)

inputting a search request expressed in natural-language and including a plurality of words; (page 38, lines 7-10)

acquiring, from the fourth memory, one of the labels which corresponds to one of the words included in the search request by comparing the words with the word- patterns, the one of the labels corresponding to one of the word- patterns which matches the one of the words, to obtain an acquired label; (page 39, line 9-line 26)

(page 39 line 22-line 26) extracting another of the words as a keyword; (page 39, lines 22-26)

retrieving, from the third memory, one of the data sets which includes the acquired label, to obtain the element name included in the one of the data sets; (page 40, lines 6-17, page 26, line 17-page 27, line 1)

retrieving, from the first memory, one of the structured data items which includes a first element whose element name is equal to the element name included in the one of the data sets and a second element whose element value includes the keyword; (page 40 lines 6-17, page 31, line 8-page 32, line 16) and

outputting the element value of the first element. (page 40, lines 6-17, page 31, line 21-page 32, line 2).

Similar support for the remaining amended claims is found in the cited portions of the specification above identified. No new matter has been added.

Further commenting on the amended claims, amended Claim 11 is directed to the case where the search request includes a label and a keyword. Amended Claim 12 is directed to the case where the search request is expressed in natural-language and includes a plurality of words. Amended Claim 15 is an apparatus claim corresponding to amended claim 11. Amended Claim 16 is an apparatus claim corresponding to amended claim 12.

The feature "estimating a category of the element value of the each of the element to obtain a label corresponding to the category" has been changed to clarify that information is acquired from the second memory (first estimation knowledge storing unit 102) and stored in the third memory (estimation results storing unit 104), based on for example the specification, page 13, lines 1-21 and page 15, line 23 to page 16, line 11.

The element of "category" has been deleted. The "first memory" corresponds to the "structured data storing unit 101." The "second memory" corresponds to the "first estimation knowledge storing unit 102." The "third memory" corresponds to the "estimation results

storing unit 104." The "fourth memory" corresponds to the "second estimation knowledge storing unit 110" in FIG. 21. The "first acquiring unit" and the "second acquiring unit" correspond to the "first estimating unit 103." The "first retrieval unit" and the "second retrieval unit" correspond to the "retrieval unit 108." The "third acquiring unit" corresponds to the "second estimating unit 111" in FIG. 21.

As stated in amended Claim 11, the present invention includes the cases of storing and retrieving structured data. As for storing the structured data, a plurality of structured data items are stored in the "first memory." The "second memory" stores in advance a plurality of element-value-patterns and a plurality of labels which correspond to the element-value-patterns respectively. The first acquiring unit acquires, from the "second memory", the label corresponding to one of the element-value-patterns which matches the element value of each element. Then, the second acquiring unit acquires the data set including the label and the element name whose element value matches the one of the element-value-patterns corresponding to the label, and stores the data set in the third memory.

As for retrieving the structured data, the first retrieval unit retrieves from the "third memory" an element name corresponding to a label included in a search request. Then, the second retrieval unit retrieves from the "first memory" the structured data including the element name concerned and a keyword.

As stated in amended claim 12, the present invention includes the cases of storing and retrieving structured data. As for storing the structured data, the same is processed as above indicated in regard to Claim 11. As for retrieving the structured data, the "fourth memory" stores in advance a plurality of word-patterns and labels corresponding to the word-patterns respectively. The third acquiring unit acquires, from the fourth memory, one of the labels which corresponds to one of the words included in the search request by comparing the words

with the word- patterns, the one of the labels corresponding to one of the word- patterns which matches the one of the words. The first retrieval unit retrieves from the "third memory" an element name corresponding to the acquired label. Then, the second retrieval unit retrieves from the "first memory" the structured data item including the retrieved element name and the keyword.

In view of the above explanations, the meaning of the claim terms, and support in the specification for the stated claim terms is believed to be clear. Accordingly, the grounds for rejection under 35 USC 112, 1st and 2nd paras., are believed to have been overcome.

Turning now to the rejection on the merits, attention is first directed to how Claims 11, 15 and 21 patentably define over Lennon and Musgrove.

For example, although element values in both cases concern "prices," the element name in "AA electric store" in FIG. 2 is "Retail price" and that in "YY electric" in FIG. 4 is "TagC." Accordingly, for managing such elements, the present invention assigns the same label to the elements which differ in element name but have the same type of element values. Thereby, it is possible to easily retrieve the data.

Specifically, a label corresponding to the element name of each element in structured data is determined according to its element value. As a result, elements having the same type of element values can be managed through the same label assigned to their element names (even though those element names differ from each other). At the time of retrieval, an element name corresponding to the label specified as a retrieval condition is retrieved first. The structured data is then retrieved using the retrieved element name as a next retrieval condition. Therefore, even though the element names differ, the elements having "prices" as element values can be easily retrieved.

Neither Lennon nor Musgrove discloses such a configuration as defined in Claims 11, 15 and 21. Therefore the outstanding rejection of these claims under 35 USC 103(a) is believed to have been overcome. Likewise, the remaining claims state similar features, as above explained, and likewise are not believed to be obviated by Lennon and Musgrove. Accordingly, the prior art ground for rejection is also believed to have been overcome.

Consequently, in view of the present amendment and in light of the above comments, no further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

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